SEQLIST

SEQUENCE LISTING

<110> Fronticelli, Clara

<120> Polymeric Hemoglobin Mutants

<130> 6056-279 PC

<140> PCT/US99/22756
<141> 2000-05-01

<150> 60/102,640
<151> 1998-10-01

<160> 12

<170> FastSEQ for Windows Version 4.0

<210> 1
<211> 438
<212> DNA
<213> Human

<400> 1
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ttctttgagt cctttgggga tctgtccact cctgatgctg ttatgggcaa ccctaaggtg 180
aaggctcatg gcaagaaagt gctcggtgcc tttagtgatg gcctggctca cctggacaac 240
ctcaagggca cctttgccac actgagtgag ctgcactgtg acaagctgca cgtggatcct 300
gagaacttca ggctcctggg caacgtgctg gtctgtgtgc tggcccatca ctttggcaaa 360
gaattcaccc caccagtgca ggctgcctat cagaaagtgg tggctggtgt ggctaatgcc 420
ctggcccaca agtatcac 438

<210> 2
<211> 438
<212> DNA
<213> Artificial Sequence

<220>

<223> Description of Artificial Sequence: Mutant Of
Human Beta-globin

<400> 2
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gatgaagttg gtggtgaggc cctgggcagg ctgctggtgg tctaccctg gacccagagg 120

SEQLIST

ttctttgagt cctttgggga tctgtccact cctgatgctg ttatgggcaa ccctaaggtg 180
aaggctcatg gcaagaaagt gctcggtgcc tttagtgatg gcctggctca cctggacaac 240
ctcaagggca cctttgccac actgagtgag ctgcatgctg acaagctgca cgtggatcct 300
gagaacttca ggctcctggg caacgtgctg gtcggtgtgc tggcccatca ctttggcaaa 360
gaattcaccc caccagtgca ggctgcctat cagaaagtgg tggctggtgt ggctaatgcc 420
ctggcccaca agtatcac 438

<210> 3
<211> 146
<212> PRT
<213> Human

<400> 3
Val His Leu Thr Pro Glu Glu Lys Ser Ala Val Thr Ala Leu Trp Gly
1 5 10 15
Lys Val Asn Val Asp Glu Val Gly Gly Glu Ala Leu Gly Arg Leu Leu
20 25 30
Val Val Tyr Pro Trp Thr Gln Arg Phe Phe Glu Ser Phe Gly Asp Leu
35 40 45
Ser Thr Pro Asp Ala Val Met Gly Asn Pro Lys Val Lys Ala His Gly
50 55 60
Lys Lys Val Leu Gly Ala Phe Ser Asp Gly Leu Ala His Leu Asp Asn
65 70 75 80
Leu Lys Gly Thr Phe Ala Thr Leu Ser Glu Leu His Cys Asp Lys Leu
85 90 95
His Val Asp Pro Glu Asn Phe Arg Leu Leu Gly Asn Val Leu Val Cys
100 105 110
Val Leu Ala His His Phe Gly Lys Glu Phe Thr Pro Pro Val Gln Ala
115 120 125
Ala Tyr Gln Lys Val Val Ala Gly Val Ala Asn Ala Leu Ala His Lys
130 135 140
Tyr His
145

<210> 4
<211> 146
<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Mutant of
Human beta-globin

<400> 4
Val His Leu Thr Pro Glu Glu Lys Cys Ala Val Thr Ala Leu Trp Gly
1 5 10 15
Lys Val Asn Val Asp Glu Val Gly Gly Glu Ala Leu Gly Arg Leu Leu

SEQLIST

20 25 30
Val Val Tyr Pro Trp Thr Gln Arg Phe Phe Glu Ser Phe Gly Asp Leu
35 40 45
Ser Thr Pro Asp Ala Val Met Gly Asn Pro Lys Val Lys Ala His Gly
50 55 60
Lys Lys Val Leu Gly Ala Phe Ser Asp Gly Leu Ala His Leu Asp Asn
65 70 75 80
Leu Lys Gly Thr Phe Ala Thr Leu Ser Glu Leu His Ala Asp Lys Leu
85 90 95
His Val Asp Pro Glu Asn Phe Arg Leu Leu Gly Asn Val Leu Val Gly
100 105 110
Val Leu Ala His His Phe Gly Lys Glu Phe Thr Pro Pro Val Gln Ala
115 120 125
Ala Tyr Gln Lys Val Val Ala Gly Val Ala Asn Ala Leu Ala His Lys
130 135 140
Tyr His
145

<210> 5
<211> 141
<212> PRT
<213> Human

<400> 5
Val Leu Ser Pro Ala Asp Lys Thr Asn Val Lys Ala Ala Trp Gly Lys
1 5 10 15
Val Gly Ala His Ala Gly Glu Tyr Gly Ala Glu Ala Leu Glu Arg Met
20 25 30
Phe Leu Ser Phe Pro Thr Thr Lys Thr Tyr Phe Pro His Phe Asp Leu
35 40 45
Ser His Gly Ser Ala Gln Val Lys Gly His Gly Lys Lys Val Ala Asp
50 55 60
Ala Leu Thr Asn Ala Val Ala His Val Asp Asp Met Pro Asn Ala Leu
65 70 75 80
Ser Ala Leu Ser Asp Leu His Ala His Lys Leu Arg Val Asp Pro Val
85 90 95
Asn Phe Lys Leu Leu Ser His Cys Leu Leu Val Thr Leu Ala Ala His
100 105 110
Leu Pro Ala Glu Phe Thr Pro Ala Val His Ala Ser Leu Asp Lys Phe
115 120 125
Leu Ala Ser Val Ser Thr Val Leu Thr Ser Lys Tyr Arg
130 135 140

<210> 6
<211> 141
<212> PRT

SEQLIST

<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Mutant Of Human Alpha-globin

<400> 6

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		20					25					30			
Phe	Leu	Ser	Phe	Pro	Thr	Thr	Lys	Thr	Tyr	Phe	Pro	His	Phe	Asp	Leu
	35					40					45				
Ser	His	Gly	Ser	Ala	Gln	Val	Lys	Gly	His	Gly	Lys	Lys	Val	Ala	Asp
50					55					60					
Ala	Leu	Thr	Asn	Ala	Val	Ala	His	Val	Asp	Asp	Met	Pro	Asn	Ala	Leu
65				70					75					80	
Ser	Ala	Leu	Ser	Asp	Leu	His	Ala	His	Lys	Leu	Arg	Val	Asp	Pro	Val
			85					90					95		
Asn	Phe	Lys	Leu	Leu	Ser	His	Ser	Leu	Leu	Val	Thr	Leu	Ala	Ala	His
		100					105					110			
Leu	Pro	Ala	Glu	Phe	Thr	Pro	Ala	Val	His	Ala	Ser	Leu	Asp	Lys	Phe
	115					120					125				
Leu	Ala	Ser	Val	Ser	Thr	Val	Leu	Thr	Ser	Lys	Tyr	Arg			
130					135					140					

<210> 7
<211> 423
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Mutant of Human alpha-globin

<400> 7

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acctacttcc cgcacttcga cctgagccac ggctctgccc aggttaaggg ccacggcaag 180
aaggtggccg acgcgctgac caacgccgtg gcgcacgtgg acgacatgcc caacgcgctg 240
tccgccctga gcgacctgca cgcgcacaag cttcgggtgg acccggtcaa cttcaagctc 300
ctaagccact ccctgctggt gaccctggcc gcccacctcc ccgccgagtt caccccctgcg 360
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cgt                                                               423
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<210> 8
<211> 4

SEQLIST

<212> PRT
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequemce: Factor Xa recognition sequence

<400> 8
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1

<210> 9
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Mutagenizing oligonucleotide for human beta-globin Ser9-Cys mutation

<400> 9
ggcagtaacg gcgcacttct cctcagg 27

<210> 10
<211> 27
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Mutagenizing oligonucleotide for human beta-globin Cys93-Ala mutation

<400> 10
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<210> 11
<211> 18
<212> DNA
<213> Artificial Sequence

<220>
<223> Description of Artificial Sequence: Mutagenizing oligonucleotide for human beta-globin Cys112-Gly mutation

SEQLIST

<400> 11
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<210> 12
<211> 423
<212> DNA
<213> Human

<400> 12
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acctacttcc cgcacttcga cctgagccac ggctctgccc aggttaaggg ccacggcaag 180
aaggtggccg acgcgctgac caacgccgtg gcgcacgtgg acgacatgcc caacgcgctg 240
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ctaagccact gcctgctggt gaccctggcc gcccacctcc ccgccgagtt cacccctgcg 360
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cgt 423